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SOME ASPECTS OF PHYSICS IN WAR AND PEACE¹

PART I. SOME APPLICATIONS OF PHYSICS TO WAR PROBLEMS

A YEAR ago in Baltimore we met with peace in prospect. The armistice had been signed. But like a strong runner who had just gotten under way we found it difficult to stop. We continued many of the programs of war. Many of us were still in uniform. Our thoughts were still largely concerned with those problems upon which we had been engaged. But now most of us are back to our normal pursuits, eager as we had been during the war to contribute our energies to securing the welfare of the nation. The tumult and the shouting dies, the captains and the kings depart, still stands the ancient and abiding sacrifice, the labor of unselfish service which we regard as the natural birthright of scientific men.

We are still too near the war to get a clear perspective of the extent to which the various agencies contributed to its successful prosecution. But we can examine it in part and later the results of our examination can be gathered together. It had been my intention to pass in review the many ways in which physics had been applied to the problems of war, but these had been so numerous and so extensive that my time would be given to a mere enumeration of the activities. For the war was one of many elements and many dimensions. Leaving aside the human and, I may add, the inhuman elements, and considering those confined to space, we had warfare in the air, on the surface of the earth, under the earth, on and under the sea. Applications of science were everywhere. Many of the applications of physics have been presented else-

¹ Address of the vice-president and chairman of Section B—Physics—American Association for the Advancement of Science, St. Louis, December, 1919.